

073105T4LAS

LAND SURVEYING LEVEL 5

LSM/OS/LM/CR/01/5/A

Conduct Topographical Survey

July/August 2025



**TVET CURRICULUM DEVELOPMENT, ASSESSMENT AND CERTIFICATION
COUNCIL (TVET CDACC)**

PRACTICAL ASSESSMENT

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INSTRUCTIONS TO TRAINEE

1. You are required to perform the following task: **Create a topographic map for a proposed drainage**
2. In this task you are required to carry out the following sub-tasks:
 - a) Select a fairly rugged site.
 - b) Using a GPS, establish two control points 40 m apart near the site.
 - c) Compute the polar join between the points.
 - d) Set up and level the total station over the first control point.
 - e) Orient to one of the other control points.
 - f) Pick point, line, curved line, and polygon features within a radius of at most 150 m.
 - g) Using the GPS pick at least 10 spot heights within the chosen site.
 - h) Record the data in Microsoft excel spreadsheets
 - i) Import the data to a mapping software
 - j) Plot the features

- k) Generate the contours at a suitable contour interval.
 - l) Symbolize and design the map.
 - m) Export the map layout in PDF format and print.
3. You are to record photos and short video clips of your performance at critical points.
4. You require the following resources for the practical tasks:

S/NO	ITEM	QUANTITY (per trainee)	PROVIDED BY
1.	100 m tape measure	1 per trainee	Institution
2.	Total station and tripod stand	At least 1 for a group of 5	
3.	Hand held GPS/ RTK	Shared	
4.	Reflector prism and pole	At least 1 for a group of 5	
5.	Wooden pegs	10 per trainee	
6.	Mallet	1 per trainee	
7.	A4 printing paper	2 per trainee	
8.	Computer with mapping software e.g ArcGIS, QGIS, AutoCAD.	1 per trainee	
9.	Printer	Shared	
10.	Foolscaps	2 per trainee	Trainee
11.	Pencil and Eraser	1 per trainee	Trainee